

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) An energy recovery system for converting heat generated during operation of a working device into electrical energy using first and second thermal media and recovering the electrical energy, the system comprising:

a cooling device that cools one of the thermal media, generating a low temperature thermal medium by maintaining the temperature of said one of the thermal media at a predetermined value; and

a thermoelectric converter that generates electricity by utilizing a temperature difference between the low temperature thermal medium and the other one of the thermal media, with said other one of the thermal media being maintained at a temperature higher than the low temperature thermal medium by heat generated during operation of the working device to generate a high temperature thermal medium with said other one of the thermal media,

wherein the cooling device is a heat pump that generates the low temperature thermal medium by utilizing heat from the high temperature thermal medium,

wherein the working device is a drive source mounted on a vehicle for causing the vehicle to travel, and the high temperature thermal medium is high temperature coolant that has been used to cool the drive source.

2. (Original) The energy recovery system according to claim 1, wherein the heat pump is an adsorption heat pump having a working medium and an adsorbent that is capable of adsorbing and desorbing the working medium, the adsorbent heat pump has a function to desorb the working medium from the adsorbent by using heat from the high temperature thermal medium, a function to liquefy the working medium that has evaporated during the desorption, and a function to evaporate the liquefied working medium by using heat from said one of the thermal media that is used to generate the low temperature thermal medium.

3. (Original) The energy recovery system according to claim 2, further comprising a cooling system for cooling and liquefying the working medium that has evaporated during the desorption from the adsorbent.

4. (Original) The energy recovery system according to claim 3, wherein the heat pump further has a function to cause the adsorbent to adsorb the working medium that has been evaporated by heat from said one of the thermal media, and wherein the cooling system limits the generation of heat at the adsorbent caused by the adsorption of the working medium.

5. (Previously Presented) The energy recovery system according to claim 3, wherein the energy recovery system is for use with a refrigerant and an air conditioner having a refrigerant circuit for circulation of the refrigerant, and the cooling system supplies to the heat pump, coolant that has been cooled by the refrigerant circulating in the refrigerant circuit.

6. (Previously Presented) The energy recovery system according to claim 1, wherein the energy recovery system is for use with an air conditioner mounted on the vehicle and includes a heat exchanger through which the low temperature thermal medium generated by the heat pump passes, wherein, when the air conditioner cools air that will be sent to a passenger compartment of the vehicle, the heat exchanger performs heat exchange between the low temperature thermal medium passing through the heat exchanger and the air that will be sent to the passenger compartment to assist cooling operation of the air conditioner.

7. (Previously Presented) The energy recovery system according to claim 6, further comprising a switching device that switches a course of travel of the low temperature thermal medium, such that the low temperature thermal medium is selectively used for electricity generation at the thermoelectric converter or for assisting the cooling operation of the air conditioner by operation of the switching device.

8. (Previously Presented) The energy recovery system according to claim 5, wherein the air conditioner is mounted on the vehicle.

9. (Previously Presented) The energy recovery system according to claim 1, wherein the vehicle has a battery, and electricity generated at the thermoelectric converter is used for charging the battery.

10-11. (Canceled)

12. (New) The energy recovery system according to claim 1, wherein the first and second thermal media are different.

13. (New) The energy recovery system according to claim 1, wherein the vehicle is a hybrid vehicle.

14. (New) The energy recovery system according to claim 2, wherein the working medium is ammonia and the adsorbent is activated carbon.

15. (New) The energy recovery system according to claim 1, wherein the low temperature thermal medium is maintained in a range of 10-20° C.

16. (New) The energy recovery system according to claim 1, wherein the high temperature thermal medium is maintained in a range of 80-90° C.